

AMENDMENTS TO THE CLAIMS

Claim 1 (Original) A door sensor characterized in that it is equipped with

 at least one door position detecting means which is attached to at least one door body that can be opened and/or closed and which is capable of detecting at least one position occupied by the at least one door body during opening and/or closing thereof;

 at least one object detecting means which is attached to the at least one door body and which detects presence and/or absence of at least one object in at least one detectable zone; and

 at least one object determining means which receives at least one output from the at least one door position detecting means and the at least one object detecting means, and which determines, in correspondence to at least one position occupied by the at least one door body during opening and/or closing thereof, whether at least one object detected by the at least one object detecting means is at least one object intended for detection.

Claim 2 (Original) A door sensor according to claim 1, the door sensor being characterized in that

 the at least one door position detecting means is attached to at least one door body made capable of being opened and/or closed as a result of rotational motion and is constituted so as to be capable of detecting at least one angular displacement position of the at least one door body.

Claim 3 (Original) A door sensor according to claim 2, the door sensor being characterized in that

 the at least one door position detecting means is made up of at least one sensor which employs geomagnetism to detect the at least one angular displacement position of the at least one door body and/or at least one sensor which employs at least one gyroscope to detect the at least one angular displacement position of the at least one door body.

Claim 4 (Currently Amended) A door sensor according to claim 1, ~~2, or 3~~, the door sensor being characterized in that it is further equipped with

at least one door controller that is attached to at least one surface facing toward at least one direction toward which the at least one door body moves when it is being opened and that stops, slows, and/or reverses the process of opening the door body in the event that at least one object detected by the at least one object detecting means is at least one object intended for detection.

Claim 5 (Currently Amended) A door sensor according to claim 1, ~~2, or 3~~, the door sensor being characterized in that it is further equipped with

at least one door controller that is attached to at least one surface facing toward at least one direction toward which the at least one door body moves when it is being closed and that stops, slows, and/or reverses the process of closing the door body in the event that at least one object detected by the at least one object detecting means is at least one object intended for detection.

Claim 6 (Original) A door sensor according to claim 4, the door sensor being characterized in that it is further equipped with

at least one door controller that is attached to at least one surface facing toward at least one direction toward which the at least one door body moves when it is being closed and that stops, slows, and/or reverses the process of closing the door body in the event that at least one object detected by the at least one object detecting means is at least one object intended for detection.

Claim 7 (Currently Amended) A door sensor according to claim 1, ~~2, 3, or 6~~, the door sensor being characterized in that

the at least one door position detecting means, the at least one object detecting means, and the at least one object determining means are housed within one sensor package.

Claim 8 (Original) A door sensor according to claim 4, the door sensor being characterized in that

the at least one door position detecting means, the at least one object detecting means, and the at least one object determining means are housed within one sensor package.

Claim 9 (Original) A door sensor according to claim 5, the door sensor being characterized in that

the at least one door position detecting means, the at least one object detecting means, and the at least one object determining means are housed within one sensor package.

Claim 10 (Currently Amended) A door sensor according to claim 1, ~~2, 3, 6, 8, or 9~~, the door sensor being characterized in that it is further equipped with

at least one fixed object detecting means which is attached to at least one fixed object installed at at least one arbitrary location and which detects presence and/or absence of at least one object within at least one detectable zone, the at least one detectable zone being at least one previously established fixed location.

Claim 11 (Original) A door sensor according to claim 4, the door sensor being characterized in that it is further equipped with

at least one fixed object detecting means which is attached to at least one fixed object installed at at least one arbitrary location and which detects presence and/or absence of at least one object within at least one detectable zone, the at least one detectable zone being at least one previously established fixed location.

Claim 12 (Original) A door sensor according to claim 5, the door sensor being characterized in that it is further equipped with

at least one fixed object detecting means which is attached to at least one fixed object installed at at least one arbitrary location and which detects presence and/or absence of at least

one object within at least one detectable zone, the at least one detectable zone being at least one previously established fixed location.

Claim 13 (Original) A door sensor according to claim 7, the door sensor being characterized in that it is further equipped with

at least one fixed object detecting means which is attached to at least one fixed object installed at at least one arbitrary location and which detects presence and/or absence of at least one object within at least one detectable zone, the at least one detectable zone being at least one previously established fixed location.

Claim 14 (Currently Amended) A door sensor according to claim 1, ~~2, 3, 6, 11, or 12~~, the door sensor being characterized in that

at least one position information output from one of the at least one door position detecting means is used in shared fashion with a plurality of object detection outputs from a plurality of the at least one object detecting means.

Claim 15 (Original) A door sensor according to claim 4, the door sensor being characterized in that

at least one position information output from one of the at least one door position detecting means is used in shared fashion with a plurality of object detection outputs from a plurality of the at least one object detecting means.

Claim 16 (Original) A door sensor according to claim 5, the door sensor being characterized in that

at least one position information output from one of the at least one door position detecting means is used in shared fashion with a plurality of object detection outputs from a plurality of the at least one object detecting means.

Claim 17 (Original) A door sensor according to claim 10, the door sensor being characterized in that

at least one position information output from one of the at least one door position detecting means is used in shared fashion with a plurality of object detection outputs from a plurality of the at least one object detecting means.

Claim 18 (Currently Amended) A door sensor according to claim 1, ~~2, 3, 6, 8, 9, 11, 12, 13, 15, 16, or 17~~ characterized in that

whereas the at least one object detecting means is constituted so as to permit switching between or among detectable zones;

the door sensor is further equipped with at least one zone switching means which receives at least one output from the at least one door position detecting means and which switches between or among detectable zones of the at least one object detecting means in correspondence to at least one position occupied by the at least one door body during opening and/or closing thereof.

Claim 19 (Original) A door sensor according to claim 4 characterized in that

whereas the at least one object detecting means is constituted so as to permit switching between or among detectable zones;

the door sensor is further equipped with at least one zone switching means which receives at least one output from the at least one door position detecting means and which switches between or among detectable zones of the at least one object detecting means in correspondence to at least one position occupied by the at least one door body during opening and/or closing thereof.

Claim 20 (Original) A door sensor according to claim 5 characterized in that

whereas the at least one object detecting means is constituted so as to permit switching between or among detectable zones;

the door sensor is further equipped with at least one zone switching means which receives at least one output from the at least one door position detecting means and which switches between or among detectable zones of the at least one object detecting means in correspondence to at least one position occupied by the at least one door body during opening and/or closing thereof.

Claim 21 (Original) A door sensor according to claim 7 characterized in that

whereas the at least one object detecting means is constituted so as to permit switching between or among detectable zones;

the door sensor is further equipped with at least one zone switching means which receives at least one output from the at least one door position detecting means and which switches between or among detectable zones of the at least one object detecting means in correspondence to at least one position occupied by the at least one door body during opening and/or closing thereof.

Claim 22 (Original) A door sensor according to claim 10 characterized in that

whereas the at least one object detecting means is constituted so as to permit switching between or among detectable zones;

the door sensor is further equipped with at least one zone switching means which receives at least one output from the at least one door position detecting means and which switches between or among detectable zones of the at least one object detecting means in correspondence to at least one position occupied by the at least one door body during opening and/or closing thereof.

Claim 23 (Original) A door sensor according to claim 14 characterized in that

whereas the at least one object detecting means is constituted so as to permit switching between or among detectable zones;

the door sensor is further equipped with at least one zone switching means which receives at least one output from the at least one door position detecting means and which switches between or among detectable zones of the at least one object detecting means in correspondence to at least one position occupied by the at least one door body during opening and/or closing thereof.

Claim 24 (Currently Amended) A door characterized in that the at least one door sensor according to ~~any one of claims 1 through 23~~ claim 1 is attached to at least one door body, the door body engaging in opening and/or closing operations in linked fashion with object detecting operations of the at least one door sensor.